

FEASIBILITY STUDY – RAW WATER FOR AGRICULTURAL IRRIGATION PURPOSES PROJECT REPORT

5.0 Water Related Permits and Approvals

5.1 GENERAL

This section provides an overview to the major government permits and approvals that will or may be required in the event that the Region of Niagara or other party proceeds with a raw water irrigation servicing scheme as envisioned by the Feasibility Study. Regulatory requirements are considered in the context of four categories:

- Provincial Legislation and Regulations;
- Federal Legislation and Regulations;
- Great Lakes Charter;
- Niagara Treaty.

Final determination of which approval requirements apply will depend upon the selection of the preferred source alternative(s). Guidance is, therefore, provided regarding which authorizations could be triggered under the source options being considered.

5.2 PROVINCIAL APPROVALS

5.2.1 Conservation Authorities Act, Ministry of Natural Resources (MNR)

The Niagara Peninsula Conservation Authority's Fill, Construction and Alteration to Waterways Regulation (O. Reg. 508/94) requires application and prior written approval for any activity that could cause or aggravate flooding or could alter or interfere with flow in a watercourse.

More specifically, an approval is required for the placement of any structure or fill in an area that is susceptible to flooding during a 'regional storm' and for any activity involving the straightening, changing, diverting or other interference with the existing channel of a river, creek, stream or other watercourse. Construction and maintenance of some dug ponds may also be subject to *Conservation Authorities Act* application and approval.

The regulation requires the party applying for an approval to supply information and plans describing the proposed undertaking in sufficient detail to allow an assessment of its potential impacts and determination of any mitigative measures that may be required.

5.2.2 Environmental Assessment Act, Ministry of the Environment (MOE)

The (*Ontario*) *Environmental Assessment Act* is intended to provide for “the betterment of the people of the whole or any part of Ontario by providing for the protection, conservation and wise management in Ontario of the environment”. The *Act* applies to undertakings by:

- The province, municipalities and other public bodies;
- Major commercial or business enterprises (with exceptions);
- Other enterprises (by agreement between the proponent and the Minister).

The *Act* provides a Class EA process (Part II.1) under which projects of a similar nature or class, e.g. municipal water and wastewater infrastructure undertakings, can be handled within an approved and generic planning, consultation and evaluation framework.

The Municipal Class EA approach allows the planning of municipal infrastructure projects to be carried out in an effective manner that meets the requirements of the *EA Act*. The current approved “parent” Municipal Class EA has been in place since 2000. It provides:

- “A reasonable mechanism for proponents to fulfill their responsibilities to the public for the provision of municipal service in an efficient, timely, economic and environmentally responsible manner;
- A consistent, streamlined and easily understood process for planning and implementing infrastructure projects; and
- The flexibility to tailor the planning process to a specific project taking into account the environmental setting, local public interests and unique project requirements” (Municipal Engineers Association. 2004).

5.2.3 Greenbelt Act and Greenbelt Plan, Ministry of Municipal Affairs and Housing (MMAH)

Ontario’s new Greenbelt Plan which was officially approved by Order in Council # 208/05, provides the policy and planning framework under which future development and use of the Niagara tender fruit and grape production lands will occur. The Plan was established under s.3 of the *Greenbelt Act, 2005* and came into effect on Dec 14, 2004. The boundaries of the Niagara tender fruit and grape production area are specifically delineated in Schedule 2 of the Plan.

The Plan’s ‘Vision’ views the Greenbelt as “a broad band of permanently protected land which:

- Protects against the loss and fragmentation of the agricultural land base and supports agriculture as the predominant land use;

- Gives permanent protection to the natural heritage and water resource systems that sustain ecological and human health and that form the environmental framework around which major urbanization in south-central Ontario will be organized; and
- Provides for a diverse range of economic and social activities associated with rural communities, agriculture, tourism, recreation and resource uses.”

The Plan’s ‘Goals’ for agricultural production and protection in the Niagara area include:

- “Protection of the *specialty crop area* land base while allowing supportive infrastructure and value added uses necessary for sustainable agricultural uses and activities;
- Support for the Niagara Peninsula *specialty crop area* as a destination and centre of agriculture focused on the agri-food sector and agri-tourism related to grape and tender fruit production;
- Increasing certainty for the agricultural sector to foster long-term investment in, improvement to, and management of the land; and
- Support for infrastructure which achieves the social and economic aims of the Greenbelt and the proposed Growth Plan while seeking to minimize environmental impacts”.

The Plan, its policies and its protection area boundaries are subject to a 10-year review. Amendments prior to this time are at the discretion of the Province.

Greenbelt Infrastructure Development Provisions

The Greenbelt Plan’s infrastructure policies specify that “planning, design and construction practices shall minimize, wherever possible, the amount of the Greenbelt, and particularly the Natural Heritage System, traversed and/or occupied by such infrastructure”.

Certain allowances are made with respect to development of infrastructure intended to serve agricultural uses. Specifically, the policies state that: “Infrastructure... such as agricultural irrigation systems, may need certain elements to be located within the *vegetation protection zone* of a *key natural heritage feature* or *key hydrologic feature*. In such instances, these elements of the *infrastructure* may be established within the feature itself or its associated *vegetation protection zone* but all reasonable efforts shall be made to keep such infrastructure out of *key natural heritage features* or *key hydrologic features* or the *vegetation protection zones*”.

Greenbelt Relationship to Other Legislation and Policies

The Greenbelt Plan fits within the broader policy framework of the Provincial Policy Statement under the *Planning Act*. As such its implementation must be integrated with other relevant laws, regulations and policies.

5.2.4 Lakes and Rivers Improvement Act (MNR)

A *Lakes and Rivers Improvement Act* approval (per O. Reg. 454/96) is required for most activities undertaken in a watercourse. This includes construction of a dam (including a structure which held back water and created a reservoir in order to divert flow), installation of a pipeline crossing within the bed of the watercourse, or channelization that could harmfully alter fish habitat or impede fish movement.

The regulation requires the party applying for an approval to supply information and plans describing the proposed undertaking in sufficient detail to allow an assessment of its potential impacts and determination of any mitigative measures that may be required.

5.2.5 Niagara Escarpment Planning and Development Act (MNR)

The *Niagara Escarpment Planning and Development Act* (NEPDA) restricts certain kinds of development within the area of jurisdiction. Where development is permitted it may require a development permit. Development activities requiring or exempted from a permit are described in O. Reg. 828/90 as amended.

Exemptions from the regulation's permit requirements are granted for agricultural development activities involving both the digging or drilling of a well and the installation or operation of a water irrigation system.

A dug farm pond constructed for irrigation purposes may require a *NEPDA* development permit depending on a number of factors relating to its location and size and to the deposition of dredged materials from the construction.

5.2.6 Ontario Water Resources Act (MOE)

Permit To Take Water

The *Ontario Water Resources Act* (s.34) requires that a water taking permit (PTTW) be obtained for any surface or groundwater withdrawal (other than for domestic or farm purposes or firefighting) where the magnitude of withdrawal is greater than 50,000 L/day. The taking of water for crop irrigation is not included within the 'farm purposes' permit exemption. A 'Director' designated under the *OWRA* may "refuse to issue or cancel a permit, may impose such terms and conditions in issuing a permit as he or she considers proper and may alter the terms and conditions of a permit after it is issued".

Given the scope of the irrigation demands under consideration, one or potentially several PTTW permits will be required, i.e. a separate permit may be required for each source and point of taking.

The Water Taking and Transfer (WT&T) Regulation (O. Reg 387/04) details both general and site-specific terms and conditions that may be applied to individual takings. The purpose of the

regulation is “to provide for the conservation, protection and wise use and management of Ontario’s waters....” as it relates to those resources being “essential to the long term environmental, social and economic well-being of Ontario”.

In considering a permit application, the Director must consider several issues including the protection of ecosystem functions, the availability of adequate water supply, and the need for and intended use of the water.

Regulatory provisions with particular relevance to the potential undertaking include:

- The Director’s obligation to consider “whether water conservation is being implemented ...in accordance with best management standards and practices...”
- The need for the Director to ensure that Ontario’s obligations under the Great Lakes Charter are complied with
- The Director’s discretionary power to require a permit applicant to:
 - Notify or consult with other persons with an interest in the proposed water taking
 - Provide information concerning the findings of such consultations
 - Provide information on efforts to resolve any concerns
- The need for an irrigation system permit holder to accurately measure and report his/her daily water taking. The measurement provision for agricultural irrigation uses takes effect on January 1, 2007. The subsequent annual reporting provision becomes effective March 31, 2008.

Note: While the Niagara Peninsula is captured under the “high use watershed” (under summer low-flow conditions) designation within the WT&T regulation, water withdrawals for agricultural purposes are exempted from special permit restrictions that otherwise apply to such watersheds.

Water Works Certificate of Approval

The construction and operation of a water works which is to be used for supplying water for agricultural purposes, where that water is not intended to “be fit for human consumption”, is exempt from the s.52 application and Certificate of Approval requirements.

5.2.7 Public Lands Act (MNR)

The undertaking of any works on public lands, e.g. shore lands, requires a ‘work permit’ pursuant to regulations issued under s.14 of the *Act*. Authority to occupy and use those lands, e.g. for an intake structure and water main, is also required. This may be in the form of an easement, license of occupation or letters patent.

5.2.8 Municipal Act (MMAH)

The existence of 2-tier government in the Niagara Region would necessitate coordination and harmonization of any local and/or regional by-laws needed to regulate access to and use of municipally supplied irrigation water. Such bylaws would set conditions regarding connections to the system, monitoring and inspection, and water rate schedules. Section 11 of the Act defines the distribution of bylaw making powers between the governance levels.

5.2.9 Other Provincial Approvals

Depending on the nature of the potential undertaking, additional approvals may be required involving the:

- *Drainage Act* – In respect of the construction, alteration, maintenance and assessment of costs of a drainage works used for the conveyance of the irrigation water supply.
- *Expropriations Act* – In respect of the acquisition, through expropriation, of any private lands required as part of the irrigation system.

5.3 FEDERAL APPROVALS

5.3.1 Canadian Environmental Assessment Act (CEAA), Environment Canada (EC)

The *Canadian Environmental Assessment Act* applies to any project where the Government of Canada has a decision-making role which could be as a regulator, a land manager, a source of funding or a proponent. The Act is founded on the principle of encouraging sustainable development for the protection of the environment and human health.

Administration of the Act's powers is based on the principle of self-assessment whereby each federal body with a "responsible authority" is responsible for ensuring that an environmental assessment occurs before any final decisions are taken. A project receives a level of assessment that is commensurate with the scale and complexity of potential impacts. There are four (4) assessment levels; screening, comprehensive study, mediation and review panel assessments. The federal government is committed to working with provincial authorities in coordinating environmental assessments.

The screening-level assessment involves documenting the project's environmental implications and determining ways to eliminate or minimize any harmful effects through modifications to the planned undertaking. Larger scale and more environmentally sensitive projects may require a comprehensive study involving mandatory public participation opportunities. Projects involving a comprehensive study, a mediation or a review panel must include consideration of i) the purpose of the project, ii) alternative means of carrying out the project, and iii) its effects on the sustainability of renewable resources.

It is likely that a project arising out of the feasibility study would be subject to the *CEA Act*, at least at the screening level, given the requirement for one or more regulatory approvals and the potential that federal funding assistance might be sought for infrastructure construction.

5.3.2 Fisheries Act, Department of Fisheries & Oceans (DFO)

The Federal Fisheries Act (s.34) prohibits the discharge of any substance that could be “deleterious to fish or fish habitat..”. The Act (s.35) also prohibits any person from carrying on or undertaking any work that “results in the harmful alteration, disruption or destruction of fish habitat”. For all intents and purposes the Act applies to all watercourses whether permanently flowing or intermittent.

Where a person proposes to carry on or undertake a work that could result in the discharge of a deleterious substance or other harmful impact on fish or fish habitat, he/she shall, provide the Minister of Fisheries and Oceans with detailed information concerning the activity (s.37). The Minister, upon review of the information, may require modifications or additions to the proposed work or undertaking as the Minister (or designate) considers necessary. The Minister may also “restrict” the proposed work or undertaking and may specify the measures to be undertaken to prevent or mitigate the discharge or impact.

DFO has an agreement with the Niagara Peninsula Conservation Authority (NPCA) whereby NPCA conducts s.35 reviews on behalf of DFO. The Authority works cooperatively with DFO and MNR staff and the project proponent in identifying any necessary preventative or mitigative measures.

5.3.3 Navigable Waters Protection Act, Transport Canada (TC)

The *Navigable Waters Protection Act* (Part 1) regulates any activity that might interfere with navigation or navigability of a watercourse. Any dumping of fill, excavation of materials, and/or placement of a structure within a navigable waterway requires the approval of the Minister. A navigable waterway is generally considered to include any watercourse capable of floating a canoe.

The Act requires the party applying for an approval to supply information and plans describing the proposed undertaking in sufficient detail to allow an assessment of its potential impacts on navigation and determination of any mitigative measures that may be required.

5.4 GREAT LAKES CHARTER

5.4.1 Great Lakes Charter (1985)

The Great Lakes Charter (GLC) is a legally non-binding agreement among the Provinces of Ontario and Quebec and the eight Great Lakes States for the protection and conservation of the

Great Lakes Basin ecosystem and for the wise and coordinated development of the basin's water resources. The Charter obligates each jurisdiction to notify and consult with the other jurisdictions when considering a water resource development project of a scale or type that could have resource sustainability implications for those jurisdictions.

Projects requiring prior notice and consultation are those involving any proposed diversion out of the Great Lakes Basin, diversion between individual lake basins, or consumptive use in which the amount of withdrawal or consumptive use exceeds 19 million L/day averaged over any 30-day period.

5.4.2 Great Lakes Charter Annex (June 2001)

The 2001 Annex to the Charter was developed and agreed to by the ten provincial and state jurisdictions to reaffirm the Charter's principles and to commit the jurisdictions to the creation and implementation of "a new common, resource-based conservation [decision-making] standard" that would apply to new water withdrawal proposals. The new standard is to be based on the principles of:

- "Preventing or minimizing Basin water loss through return flow and implementation of environmentally sound and economically feasible water conservation measures; and
- No significant adverse individual or cumulative impacts to the quantity or quality of the Waters and Water Dependent Natural Resources of the Great Lakes Basin; and
- An Improvement to the Waters and Water Dependent Natural Resources of the Great Lakes Basin; and
- Compliance with the applicable state, provincial, federal, and international laws and treaties".

In signing the Annex, the Premiers and Governors committed to cooperatively developing and implementing the 'common standard' and to amending their jurisdiction's legislation to allow for and require its application on a legally binding basis.

5.4.3 Status of GLC Annex Commitments

In July and August 2005, the individual jurisdictions commenced public hearings on an Annex implementation agreement. The proposed Great Lakes Basin Sustainable Water Resources Agreement would commit the jurisdictions to:

- Ban diversions and bulk removals of Great Lakes Basin water with limited exceptions governed by strict controls.

- Strictly regulate the limited exceptions using a strengthened environmental standard together with further restrictions and rules of eligibility.
- Establish a new “environmental standard” to be used by the provinces and states to manage and regulate proposed withdrawals and to guide the joint review of “regionally significant proposals”.
- Establish a regional body consisting of the premiers and governors (or their designates) to address common concerns and ensure compliance with the agreement.
- Establish a process for “regional review” of major proposals.
- Develop enhanced water management and conservation programs that will reduce demand for water and improve efficiency by all water users.
- Develop a system for enhanced and cooperative information gathering and sharing regarding water use and for applying science to support decision-making.

The proposed “environmental standard” would impose the following criteria in assessing the acceptability of a proposed withdrawal.

- The need for all or part of the water cannot be avoided through conservation.
- The amount of water withdrawn is limited to what is reasonable.
- All the water withdrawn is returned to the same Great Lake watershed from which it was taken, less an allowance for consumptive use, including water lost through evaporation, incorporation into products or other processes. No water from outside the Basin may be used to supplement the return flow.
- There will be no adverse impacts – individually or cumulatively.
- Conservation measures are implemented to minimize the withdrawal and the consumption of water associated with it.
- All applicable laws shall be met, including the bi-national Boundary Waters Treaty where it applies.
- If the proposal is for an exception to the prohibition of diversions, all additional restrictions must also be met.

Enforcement of the environmental standard is to be provided through domestic laws and regulations subject to each jurisdiction permitting the other parties to seek judicial review of a decision on withdrawals that are subject to the environmental standard.

Any water withdrawal equal to or greater than 19 million litres per day averaged over a 90-day period is considered regionally significant, is subject to the environmental standard and must undergo regional review.

It is anticipated that the finalized Annex implementation agreement documents will be ready for signature by the premiers and governors before the end of 2005.

5.5 NIAGARA TREATY

The Niagara River Water Diversion Treaty (1950) governs the sharing of water between Canadian and United States interests and the diversion and allocation of water to serve specific uses. Its provisions replace and supersede water sharing provisions found in the International Boundary Waters Treaty (1909) as they apply to shared waters of the Niagara River area²².

The Niagara Treaty's purpose is "to preserve and enhance the scenic beauty of Niagara Falls and the Niagara River, while providing for the most beneficial use of the river waters". It establishes limitations on the diversion of water for power generation. The waters available for power diversion are specified to include:

- The total outflow from Lake Erie through the Welland Canal.
- The total outflow from Lake Erie through the Niagara River (including the Black Rock Canal).
- Less the amount of water used and necessary for domestic/sanitary purposes and for the canals for navigation purposes.
- Less the amount of water required to maintain minimum scenic flows over the Falls as prescribed for different times of day and different times of year.

The Niagara Treaty does not make provision for the permitted or required allocation of waters to other uses (i.e. other than those uses identified above) including agricultural irrigation. The lack of reference to irrigation appears to negate provisions in the Boundary Waters Treaty (Article VIII) that give irrigation uses the same level of allocation priority as that given to power generation²³. That shared level of allocation priority continues to apply outside the designated waters of the Niagara area.

Once the said waters are no longer available for power generation, they are generally felt to be available for other uses including irrigation. This suggests that a portion of the waters of the Lower Niagara River, of Twelve-Mile Creek below DeCew Falls, and of the Welland Canal downstream of Lock #6 can be considered as potential sources for irrigation.

²² Personal communication. Mr. Len Falkiner, Canadian Secretary, Niagara Board of Control.

²³ Ibid.

Clarification is being sought from the Canadian Department of Foreign Affairs regarding the potential availability and conditions of use pertaining to waters upstream of these points. Given the legal and inter-jurisdictional complexities surrounding this issue, a government response was not expected prior to completion of the Phase 1 Feasibility Study.

5.6 SUMMARY

Any proposed undertaking to supply irrigation water for agricultural purposes will involve a number of provincial and federal permits and approvals.

The most fundamental and potentially most challenging of these is likely to be the approval to “take water”. The primary instrument involved is a Permit to Take Water as required under s.34 of the *Ontario Water Resources Act*. The application for the permit must satisfy a number of tests relating to the purpose and magnitude of the withdrawal, availability of supply, the prevention or minimization of impacts on other water users and the environment, and the demonstration that best sectoral practices will be implemented in the conservation and use of the water.

In considering source options, larger watercourses offer greater certainty (than smaller sources of supply) that the level of taking is not likely to interfere with other interests. Similarly taking of water during periods of higher flow can prevent or lessen impacts on the environment and other users.

The Great Lakes Charter and the Niagara Treaty are other key source selection and approval considerations. Source options that do not result in an intra-basin diversion of water and that avoid other issues relating to the bi-national sharing of water would involve less complexity. Ontario’s Great Lakes Charter obligations would be dealt with as a necessary component of the *OWRA* Permit To Take Water application review process.